REMARKS

This application has been reviewed in light of the Office Action dated February 1, 2008. Claims 1-33 are pending in the application. No new matter has been added. The Examiner's reconsideration of the rejection in view of the following remarks is respectfully requested.

By the Office Action, claims 1-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,748,416 to Carpenter et al. (hereinafter Carpenter) in view of U.S. Patent No. 6,687,229 to Kataria et al. (hereinafter Kataria).

Carpenter is directed to a system and method for providing an optimized access path for Internet users that avoids intermediary device. These intermediary devices are described as firewalls, file caches and directory services (see col. 1, lines 15-20). The system of Carpenter provides an alternate way of accessing the Internet without having to use a SOCKS server or a particular access server. Carpenter does not disclose or suggest the use of proxy servers to dynamically reroute network traffic by negotiating between the servers in an overlay network of proxy servers. Carpenter fails to disclose or suggest many of the elements of the present claims as will be described below. For example, Carpenter does not teach how an overlay network can self-organize to optimize multicast streaming as provided in accordance with the present invention.

Kataria fails to cure the deficiencies of Carpenter. Kataria discloses a system concerned mainly with finding a network path that provides "a shortest distance" for improved delay performance in a route selection process (col. 5, lines 40-43). A shortest distance routine is employed to find the best paths and then the links with insufficient bandwidth are removed as

possible candidates (col. 7, lines 39-45). Kataria merely presents a quality-of-service aware short path algorithm from a single node in the network to another single node in the network.

Claim 1 of the present invention includes, *inter alia,* a method of distributing streaming data in a wide area network that comprises a plurality of autonomous systems having an overlay network of proxy servers includes communicating between a proxy server and neighboring proxy servers to identify proxy servers and data paths for providing a data stream to a requester that optimize utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths, said communicating comprising exchanging messages with said neighboring proxy servers; and activating an identified neighboring proxy server in response to said communicating to form a portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester.

The cited combination does not disclose or suggest an overlay network of proxy servers. Even if the cited combination did teach an overlay network of proxy servers, the cited combination does not disclose or suggest communicating between a proxy server and neighboring proxy servers to identify proxy servers and data paths for providing a data stream to a requester that optimize utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths, as set forth in claim 1. This communicating includes communications between proxy servers to determine how to better distribute network **traffic loads** between the proxy servers. This includes under and over utilized proxy servers. There is nothing in either reference that discloses or suggests these concepts.

It is respectfully submitted that the examiner has mistakenly considered SOCKS servers as proxy servers and mistakenly assumed that the tiered system of the SOCKS servers is a hierarchy of proxy servers. This is not the case. SOCKS servers are intermediary servers located at a client that permit bypassing of a firewall. Clients are permitted to employ only the SOCKS server to retrieve preselected services by avoiding a firewall (col. 1, lines 15-40 of Carpenter).

In stark contrast, proxy servers are capable of handling any and all traffic normally permissible for the servers that they serve or support. Proxy serves are not limited to a client location and may be distributed throughout the overlay network to handle any traffic.

In Carpenter, at each client agent, the SOCKS servers or intermediaries are ranked into tiers and the best tiers are employed. The tiers are ranked based on the collection of passive performance data collected by a policy server (see col. 3, lines 25-40 of Carpenter). Traffic load is not negotiated by or between SOCKS servers. SOCKS servers are not used to divert traffic and perform the other steps as outlined in claim 1.

Even if, *arguendo*, SOCKS servers could be considered proxy servers (which they are not), there is no teaching or suggestion that the SOCKS servers communicate between each other to identify proxy servers and data paths for providing a data stream to a requester that optimizes utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths, as set forth in claim 1. Further, Carpenter does not disclose or suggest that the communications comprise exchanging messages with neighboring proxy servers. In addition, Carpenter does not disclose or suggest that activating an identified neighboring proxy server in response to said communicating to form a

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portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester. There is no exchange of messages or activation of neighboring proxy servers as recited in claim 1.

Kataria fails to cure these deficiencies. Kataria was cited to show the step of activating; however, Kataria does not disclose or suggest this step or the other steps as set forth in claim 1. Claim 1 recites activating an identified neighboring proxy server in response to said communicating to form a portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester. Kataria does not activate an identified neighboring proxy server in response to a communication exchange with another proxy server in a hierarchical overlay network of proxy servers. Instead, Kataria simply provides a shortest path computation through a network. There is no disclosure or suggestion of 1) communicating between a proxy server and neighboring proxy servers to identify proxy servers and data paths for providing a data stream to a requester that optimize utilization of network resources based upon a predetermined relationship that characterizes tensions of said proxy servers and data paths, said communicating comprising 2) exchanging messages with said neighboring proxy servers; and 3) activating an identified neighboring proxy server in response to said communicating to form a portion of a hierarchical overlay network structure of interconnected proxy servers that establish optimum data paths through the overlay network for supplying the data stream to said requester. In short, there is no communicating between proxy servers, no exchange of messages and no activation of another proxy server in response to the communication disclosed or suggested by

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Kataria.

It is respectfully requested that the Examiner realize the difference between establishing optimum paths as taught by the cited references and creating an organization strategy which optimizes resource usage (in the presence of multiple multicast streams) to benefit an entire network. It is therefore respectfully submitted that the cited combination of Carpenter and Kataria, taken singly or in combination, fails to disclose or suggest all of the claimed elements in claim 1. In addition, the cited combination is completely different from the present invention in concept and in practice that one skilled in the art would not arrive at the present claims given the cited references alone or in combination. Claim 1 is therefore believed to be in condition for allowance over the cited combination for at least the cited reasons. Claims 17 and 24 include similar subject matter and are believed to be in condition for allowance for at least the same reasons as claim 1. Dependent claims 2-16, 18, 23, and 26-33 are also believed to be in condition for allowance over the cited combination due at least to their dependencies from claims 1, 17, and 24, respectively. Reconsideration of the rejection is earnestly solicited.
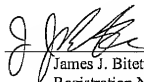
Enclosed is a two-month Petition for extension of time to respond to the Office Action. The office is authorized to charge the fee of $460 to applicants Deposit Account No. 14-0627. It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to Deposit Account No. 14-0627.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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